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IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF MARYLAND

APR - 6 2012

CATHODE LIGHTING SYSTEMS, INC.

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AT GREENBELT  
CLERK U.S. DISTRICT COURT  
DISTRICT OF MARYLAND

*MW* DEPUTY

Plaintiff

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Civil No. PJM 10-2145

v.

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FEELUX LIGHTING, INC., et al.

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Defendants

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MEMORANDUM OPINION & ORDER

**I. Introduction**

Cathode Lighting Systems, Inc. ("Cathode") has sued Feelux Lighting, Inc. and Feelux Lighting Co., Ltd. ("Feelux"), alleging infringement of Claims 1-3 and 5-6 of U.S. Patent No. 6,454,431 (the "'431 patent"), entitled "Lighting System," issued on September 24, 2002. The matter is before the Court for claim construction of the '431 patent. *See generally Markman v. Westview Instruments, Inc.*, 517 U.S. 370 (1996).

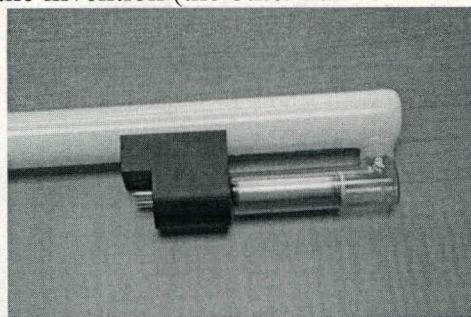
The '431 patent discloses a modular cove lighting system formed of tubular cold cathode fluorescent light fixtures. The system is designed to connect several lamps together end-to-end to create the illusion of one continuous lamp. The lamp includes three sets of connected tubes. The first tube is illuminated along its entire length and constitutes the greater part of the lamp. At or near each end of the first tube, a short second tube extends perpendicular to the first tube. From the opposite end of each second tube, a third tube enclosing an electrode extends at a right angle to the second tube and parallel to the first tube. The three tubes together form a "C"

shape. A lamp base supports the first and third tubes so as to maintain their parallel, spaced-apart relation.<sup>1</sup>

The U.S. Patent and Trademark Office (“USPTO”) issued a first Office Action on June 21, 2000, rejecting all 73 claims of the patent application as anticipated by U.S. Patent No. 5,564,818 (the “‘818 patent”) to Grossman or obvious over the ‘818 patent in view of U.S. Patent No. 4,545,774 (the “‘774 patent”) to Van Gil et al. or U.S. Patent No. 4,592,702 to Bogage (the “‘702 patent”). In response, the Applicant requested reconsideration, arguing that the ‘818 patent did not qualify as prior art based on the priority of the Applicant’s application. On March 1, 2001, the USPTO issued a second Office Action rejecting all of the Applicant’s claims as obvious over the ‘774 patent in view of U.S. Patent No. 4,587,600 (the “‘600 patent”) to Morton. In response, the Applicant amended Claim 65 by adding the limitation “such that said electrode is located between said second tube and said lamp base” and Claim 72 by adding the limitations “providing an electrode in said third tube” and “locating said electrode between said lamp base and said second tube.” The Applicant declared, without explanation, that these new limitations distinguished the invention over the applied references. Following these amendments, the USPTO determined Claims 65 and 72 to contain allowable subject matter, with specific

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<sup>1</sup> The following photograph of one half of a commercial embodiment of the ‘431 patent illustrates the invention (the other half is the mirror image):



The white tube is one end of the first tube. The short glass tube protruding from the end of the first tube is a second tube. The medium-length glass tube parallel to the white tube is a third tube. The black structure is the lamp base.

reference to the newly added requirement that the electrode be located between the second tube and the lamp base. Claims 65 and 72 issued as Claims 1 and 5, respectively, in the '431 patent.

## II. Principles of Claim Construction

Claim construction is determined as a matter of law. *See Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 391 (1996); *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1456 (Fed. Cir. 1998) (en banc).

A court looks first to the claims of the patent to define the scope of the patented invention and the limits of the patentee's rights. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc); *Bell Atl. Network Servs., Inc. v. Covad Commc'ns Grp., Inc.*, 262 F.3d 1258, 1267 (Fed. Cir. 2001). The words of a claim are usually accorded "their ordinary and accustomed meaning as understood by one of ordinary skill in the art" at the time the patent application was filed. *Phillips*, 415 F.3d at 1312–13; *Bell Atl. Network Servs.*, 262 F.3d at 1267. "Importantly, the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification." *Id.*

In construing claims, a court first considers evidence intrinsic to the patent, including (1) the words of the claims themselves; (2) the remainder of the patent specification; and (3) the prosecution history. *See Phillips*, 415 F.3d at 1314. The court may then resort to relevant extrinsic evidence, such as dictionary definitions, treatises, and expert and inventor testimony, but such evidence "is less significant than the intrinsic record in determining the legally operative meaning of claim language." *Id.* at 1317 (internal quotations omitted).

When examining the words of the claims, the use of a claim term within the context of a claim can provide a firm basis for construction. *See Phillips*, 415 F.3d at 1314.

How a term is used in other claims can also be instructive, as “claim terms are normally used consistently throughout the patent.” *Id.* “For example, the presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim.” *Id.* at 1314-15.

The terms of a claim must also be examined in the context of the patent specification, of which they are a part. *See id.* at 1315. “[T]he specification is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.” *Id.* (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)). For example, if the patentee explicitly defines a claim term in the specification differently from its ordinary or accustomed meaning, “the inventor’s lexicography governs.” *Phillips*, 415 F.3d at 1316. But while “claims must be read in view of the specification, . . . limitations from the specification are not to be read into the claims.” *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1326 (Fed. Cir. 2002).

As part of the intrinsic evidence, the court also considers the patent’s prosecution history, which consists of the complete record of the proceedings before the USPTO, including the prior art cited during the patent examination, and “any express representations made by the applicant regarding the scope of the claims.” *Bell Atl. Network Servs.*, 262 F.3d at 1268; *see also Phillips*, 415 F.3d at 1317. The prosecution history can demonstrate “whether the patentee has relinquished a potential claim construction in an amendment to the claim or in an argument to overcome or distinguish a reference.” *Bell Atl. Network Servs.*, 262 F.3d at 1268.

With these principles in mind, the Court examines the disputed claim terms of the ’431 patent.

### III. Construction of Claim Terms of the '431 Patent

The Parties dispute construction of four distinct terms found in Claims 1 and 5 of the '431 patent: (a) "lamp base;" (b) "a first portion for supporting the first tube and a second portion for supporting the third tube;" (c) "between;" and (d) "a lamp base configured to receive the first tube and prevent torque stress from being applied to the lamp as electrode leads connected to said electrode are installed or removed from the lampholder."<sup>2</sup> Claims 1 and 5 are reproduced below with the disputed terms underlined:

1. A lamp base for use with a lamp having a first tube illuminated along its entire length, a second tube connected to the first tube and a third tube connected to the second tube, the first, second and third tubes being in fluid communication, the third tube being disposed in parallel spaced-apart relation with the first tube and enclosing an electrode, the lamp base comprising a first portion for supporting the first tube and a second portion for supporting the third tube, such that said electrode is located between said second tube and said lamp base, the first and second portions cooperating to retain the first and third tubes in spaced-apart relation.

('431 patent, col. 14 l. 66 – col. 15 l. 9.)

5. A method of using a lampholder with an end-to-end illuminated lamp, the method comprising the steps of:
  - providing a lamp having a first tube, a third tube disposed in a parallel relation to the first tube, and a second tube connecting the first and third tubes;
  - providing an electrode in said third tube;
  - providing a lamp base configured to receive the first tube and prevent torque stress from being applied to the lamp as electrode leads connected to said electrode are installed or removed from the lampholder; and
  - locating said electrode between said lamp base and said second tube.

(*Id.* col. 16 ll. 4-16.)

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<sup>2</sup> Feelux has also proposed construction of the term "electrode" found in Claims 1 and 5. Feelux argues that this term should be accorded its ordinary meaning, which, based on technical dictionary definitions, is "an electrical conductor through which an electrical current enters or leaves a medium." Cathode argues that there is no need to construe this "conventional term"—however, it does not appear to actually dispute Feelux's proposed construction. Because the Court need only construe claims "that are in controversy, and only to the extent necessary to resolve the controversy," *Vivid Techs., Inc. v. Am. Sci. & Enc'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999), the Court does not construe this term.

a. "lamp base"

Feelux proposes that the Court construe the term "lamp base" to mean "a part or cap at the end of a lamp tube that has the pins, leads, or other terminals for making an external electrical connection either directly or through a socket." Cathode contests that construction and argues that the plain and ordinary meaning of the term does not require that the lamp base conduct electricity or contain pins.

The Court begins with the claim language itself. *See Vitronics*, 90 F.3d at 1582. Claim 1 describes "a lamp base for use with a lamp," having the first, second, and third tubes, as required, and explicitly requires that the lamp base include "a first portion for supporting the first tube and a second portion for supporting the third tube" and that "the first and second portions cooperat[e] to retain the first and third tubes in spaced-apart relation." ('431 patent, col. 15 ll. 5-11.) The terms "supporting," "retain," and "spaced-apart" indicate that the lamp base must be a rigid structure of at least one piece with some ability to stably separate two tubes.

To determine whether the "lamp base" requires more than the minimal structure described in Claim 1, the Court looks for guidance in the written description of the invention, which is "the single best guide to the meaning of a disputed term." *Phillips*, 415 F.3d at 1315 (quoting *Vitronics*, 90 F.3d at 1582). The written descriptions states:

A lamp base is provided that includes a first portion configured to surround an end of the third tube and a pair of orifices for receiving electrical leads from the electrode. The lamp base includes a second portion configured to receive and to be adhered to a portion of the first tube and protect the third tube from any torque stress or breakage when the electric-lamp is snapped into the lampholder.

('431 patent, col. 3 ll. 14-20.) This language is not sufficient to act as a "special definition . . . clearly stated in the patent specification or file history." *Vitronics*, 90 F.3d at 1582.

Nevertheless, it does describe first and second portions that support and retain the tubes, which allow the third tube to "float" and which do "not receive any torque stress when the lamp is

installed or removed from the lampholder.” (’431 patent, col. 12, lines 41-43.) Other details contained in this description of “lamp base” do not limit construction of the term. Insofar as the description may refer to orifices for receiving electrical leads from an electrode, Claim 1, in fact, does not contain those terms. The Court may not import limitations from the specification into the claims. *See Superguide Corp. v. DirecTV Enters., Inc.*, 358 F.3d 870, 875 (Fed. Cir. 2004). Accordingly, the Court agrees with Cathode that the claim does not require that a “lamp base” conduct electricity or contain pins.

Additionally, with respect to Feelux’s proposal that the lamp base must include pins, leads, or other terminals for making an external electrical connection, dependent Claim 2 is instructive. Claim 2 incorporates all the limitations of Claim 1 and adds that “the second portion includes a pair of electrical contacts for electrically coupling the lamp to a lighting fixture.” (’431 patent, col. 15 ll. 10-12.) Because the limitations of a dependent claim are generally presumed not to be superfluous, the recitation of a pair of electrical contacts in Claim 2 is further evidence that the “lamp base” does not require “a pair of electrical contacts.” *See Phillips*, 415 F.3d 1303, 1315 (“[T]he presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim.”) (citing *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 910 (Fed. Cir. 2004)). While it may be true that lamps conventionally include electrodes and conduct electricity, one of ordinary skill would not necessarily assume that electrical contacts must be positioned on the lamp base.

Both Parties have submitted extrinsic evidence to support their interpretation of the term “lamp base.” Of course, this type of evidence is only reliable to the extent the Court considers it “in the context of the intrinsic evidence.” *Phillips*, 415 F.3d at 1318-19. None of the extrinsic evidence, in the Court’s view, indicates a definition of a “lamp base” that would clearly

inform the ordinarily skilled artisan, in consequence of which it fails to influence the Court's analysis.

The Court, therefore, construes the term "lamp base" in the context of the claims to mean "a rigid supporting structure that provides support to the first and third tubes to retain them in parallel spaced-apart relation." By virtue of the other limitations of Claim 1, the lamp base must also be comprised of a first portion for supporting the first tube and a second portion for supporting the third tube, such that the electrode enclosed in the third tube is located between the second tube and the lamp base. ('431 patent, col. 15 ll. 5-9.)

**b. "a first portion for supporting the first tube and a second portion for supporting the third tube"**

The Parties dispute the meaning of the phrase, "a first portion for supporting the first tube and a second portion for supporting the third tube." Feelux proposes that the "first portion for supporting the first tube" means "an integral portion of the lamp base that adheres to and cradles the first tube" and that the "second portion for supporting the third tube" means "an integral portion of the lamp base that protects the third tube." Feelux also argues that the phrase as a whole connotes means-plus-function language, which should be construed according to 35 U.S.C. § 112 ¶ 6.<sup>3</sup> Cathode disputes that the portions need be "integral" to the lamp base but suggests no alternative construction.

Although the claims and the written description do not use the term "integral" to describe the first and second portions, Feelux asks this Court to imply such a feature based on the fact that no alternative embodiments (i.e. embodiments where the portions are not integral) are disclosed. It is true that the patent specification does not show or suggest any embodiment

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<sup>3</sup> 35 U.S.C. § 112 ¶ 6 requires: "An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof."

where the “portions” are on separate elements. On the other hand, and more importantly, the claims themselves recite “the lamp base comprising: a first portion . . . and a second portion.” The term “portion” means “part of a whole.” In the context of Claim 1, the portions are part of the lamp base. Therefore, a plain reading of Claim 1 suggests the phrase, “the lamp base comprising: a first portion for supporting the first tube and a second portion for supporting the third tube” means “the two portions are part of the lamp base and each must be capable of accomplishing their respective supporting functions.”

As for the applicability *vel non* of § 112 ¶ 6, “a claim term that does not use ‘means’ will trigger the rebuttable presumption that § 112 ¶ 6 does not apply.” *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1369 (Fed. Cir. 2002). That presumption can be rebutted if the claim term “fails to recite sufficiently definite structure or else recites a function without reciting sufficient structure to perform that function.” *Id.* (quoting *Watts v. XL Sys., Inc.*, 232 F.3d 877, 880 (Fed. Cir. 2000)) (internal quotations omitted). In the instant case, the first and second portions are part of the lamp base, which is a rigid structure. The Court finds the recitation of a lamp base is a sufficiently definite structure and the lamp base’s solid nature and ability to hold each tube provides sufficient structure for performing the claimed functions. Therefore, the phrase, “a first portion for supporting the first tube and a second portion for supporting the third tube” does not invoke §112 ¶ 6.

**c. “between”**

Feelux suggests that “between” means “located in the space that separates.” Under Feelux’s proposal, the limitation that the “electrode is located between said second tube and said lamp base,” means that one could draw lines from the proximal side of the second tube where it meets the first tube to the proximal side of the lamp base where it meets the first tube,

and from the proximal side of the opposite end of the second tube where it meets the third tube to the proximal side of the opposite end of the lamp base where it meets the third tube, and the area that falls within those two lines and the proximal sides of the second tube and the lamp base would be “between” the second tube and the lamp base. Cathode counters that “between” in this context must be understood by looking at the space that separates the second tube and the lamp base, in parallel relation to each other, across all planes, i.e. the electrode must be located in a portion of the third tube that has the second tube and the lamp base on opposite ends, even if the third tube is on a separate plane from those other two markers.

The Court believes Cathode has the more persuasive argument. The specification and prosecution history provide no basis for limiting the term “between” as Feelux proposes. The phrase, “the electrode is located between said second tube and said lamp base,” was added during prosecution and was cited by the examiner among the reasons for allowance. The amendment purportedly overcame the combination of two patent references—the ’774 patent and the ’600 patent—but otherwise the lack of explanation in the prosecution history regarding the term “between” fails to resolve the present dispute. In other words, the prosecution history does not preclude a broad reading of the term “between.”

Absent other evidence, the Court is obligated to give the term “between” its ordinary and customary meaning as applied to the ’431 patent. No intrinsic or extrinsic evidence appears dispositive on this issue. The Court therefore finds the following: First, one of ordinary skill would not construe the term “between” to have a specialized definition. Second, the specification and prosecution history do not limit the scope of the term “between.” Third, multiple constructions of the term are consistent with the ’431 patent specification. In sum, the Court finds that the term “located between said second tube and said lamp base” means “located

in the space that separates the second tube and lamp base,” wherein the space may be defined by parallel lines at the proximal surfaces of the second tube and lamp base, in parallel relation to each other, across all planes.<sup>4</sup>

**d. “a lamp base configured to receive the first tube and prevent torque stress from being applied to the lamp as electrode leads connected to said electrode are installed or removed from the lampholder”**

The primary disagreement between the Parties concerning the meaning of the “a lamp base configured to receive the first tube and prevent torque stress from being applied to the lamp as electrode leads connected to said electrode are installed or removed from the lampholder” limitation is whether the lamp base need be a rigid coupling. Feelux argues that “a rigid coupling” is the only structure disclosed by the ’431 patent capable of performing the receiving and torque stress prevention functions and, therefore, the limitations should be read as meaning “a lamp base forming a rigid coupling between the first tube and the electrode leads to prevent torque stress from being applied to the lamp as electrode leads connected to said electrode are installed or removed from the lamp holder.” Cathode submits that this would improperly import limitations into the claim. The Court agrees with Feelux.

“[C]laims cannot be broader of scope than the invention that is set forth in the specification.” *On Demand Mach. Corp v. Ingram Indus., Inc.*, 442 F.3d 1331, 1340 (Fed. Cir. 2006). A rigid coupling requirement does not limit the claim to the specific embodiments

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<sup>4</sup> Insofar as the construction of the term “between” describes the dimensions of the accused product, the construction is purely coincidental. “[C]laims may not be construed with reference to the accused device.” *Wilson Sporting Goods Co. v. Hillerich & Bradsby Co.*, 442 F.3d 1322, 1330-31 (Fed. Cir. 2006) (quoting *NeoMagic Corp. v. Trident Microsystem, Inc.*, 287 F.3d 1062, 1074 (Fed. Cir. 2002); *SRI Int'l v. Matsushita Elec. Corp. of Am.*, 775 F.2d 1107, 1118 (Fed. Cir. 1985) (en banc)). “The rule, however, does not forbid awareness of the accused product or process to supply the parameters and scope of the infringement analysis, including its claim construction component. *Wilson Sporting Goods*, 442 F.3d at 1331. The Court construes the term “space” as it relates to the meaning of “between” to resolve the Parties’ dispute as to the meaning of the term, and not to foreclose the question of whether the accused product lies within that scope.

disclosed by the specification. To the contrary, while several lamp bases different from the disclosed embodiments in size, shape, or material might be within the scope of the claimed invention, it is highly doubtful that someone of ordinary skill in the art would have imagined any structure capable of performing the claimed functions that was not rigid nor a coupling. On the other hand, the claim limitation does not require the coupling of the first tube to the electrode. Therefore, the Court construes the phrase, "a lamp base configured to receive the first tube and prevent torque stress from being applied to the lamp as electrode leads connected to said electrode are installed or removed from the lampholder," to mean "a rigid supporting structure that provides support to the first and third tubes to retain them in parallel spaced-apart relation that is configured to receive the first tube and prevent torque stress from being applied to the lamp as electrode leads connected to said electrode are installed or removed from the lampholder."

#### **IV. Conclusion**

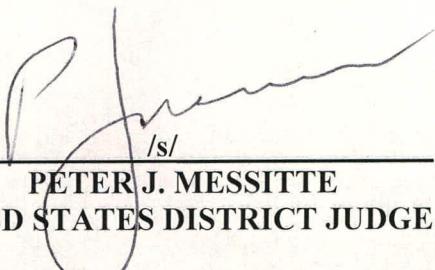
Summing up, the Court construes the disputed claim terms in the '431 patent as follows:

- (a) The term "lamp base" of Claim 1 is construed as meaning "a rigid supporting structure that provides support to the first and third tubes to retain them in parallel spaced-apart relation."
- (b) The term "a first portion for supporting the first tube and a second portion for supporting the third tube" of Claim 1 is construed as meaning "the two portions are part of the lamp base and each must be capable of accomplishing their respective supporting functions."
- (c) The term "located between said second tube and said lamp base" of Claim 1 is construed as meaning "located in the space that separates the second tube and lamp base," wherein

the space may be defined by parallel lines at the proximal surfaces of the second tube and lamp base, in parallel relation to each other, across all planes.

(d) The term “a lamp base configured to receive the first tube and prevent torque stress from being applied to the lamp as electrode leads connected to said electrode are installed or removed from the lampholder” of Claim 5 is construed as meaning “a rigid supporting structure that provides support to the first and third tubes to retain them in parallel spaced-apart relation that is configured to receive the first tube and prevent torque stress from being applied to the lamp as electrode leads connected to said electrode are installed or removed from the lampholder.”

**SO ORDERED.**



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/s/  
**PETER J. MESSITTE**  
**UNITED STATES DISTRICT JUDGE**

April 5, 2012